1125-20-446    **Jane Gilman\*** (`gilman@rutgers.edu`). *Adjoining Roots and Rational Powers of Generators in $PSL(2, \mathbb{R})$ and Discreteness.*

We give necessary and sufficient discreteness conditions when a root or a rational power of an algorithmic *stopping generator* is adjoined to a discrete free rank two subgroup of $PSL(2, \mathbb{R})$. We also present results for non-free groups. (Received September 02, 2016)